Trend Study 17-52-05

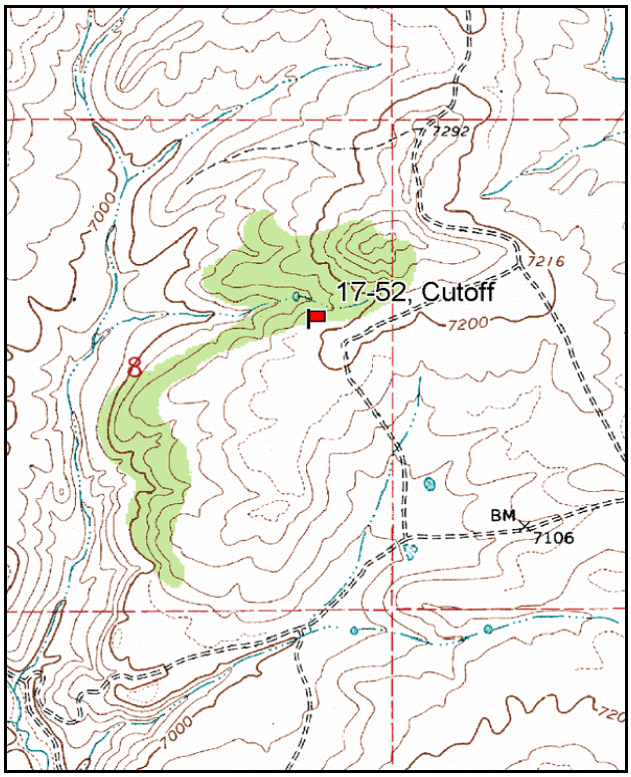
Study site name: Cutoff . Vegetation type: Mountain Big Sagebrush .

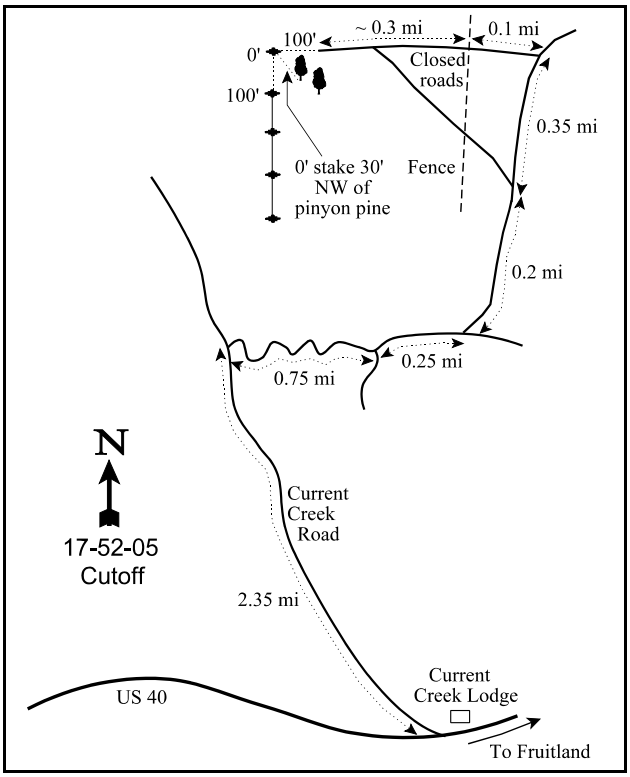
Compass bearing: frequency baseline 179 degrees magnetic.

Frequency belt placement: line 1 (6 & 90ft), line 2 (26ft), line 3 (57ft), line 4 (69ft).

LOCATION DESCRIPTION

From the intersection of Currant Creek Road and Highway U.S. 40, drive north on the Currant Creek Road for 2.35 miles. Turn right and go east 0.75 miles to an intersection. Turn left and drive north for 0.25 miles to a "T". At the "T", turn left and go 0.2 miles to a fork. Stay right for another 0.35 miles to another fork. Turn left and drive to the fence. Cross the fence and walk to the end of the road (about a third of a mile) to the west. The 0-foot baseline is 100 feet west of the end of the road. The 0-foot stake is about 30 feet north west of a mature pinyon pine.





Map Name: Deep Creek Canyon

Diagrammatic Sketch

Township 3S , Range 9W , Section 8

GPS: NAD 27, UTM 12T 4453656 N, 506989 E

DISCUSSION

Cutoff - Trend Study No. 17-52

The Cutoff trend study is on private land, about 1/3 mile west of Division of Wildlife land, on winter range. The area is immediately north of Currant Creek Lodge. The range type is sagebrush-grass with a mixture of some mountain brush. Slope varies from 10% to 20% with a west aspect. Elevation is approximately 7,200 feet. Pellet group frequency data indicates the area is used heavily by deer. Pellet group data in 2000 were estimated at 96 deer and 8 elk days use/acre (237 ddu/ha and 20 edu/ha). The 2005 pellet group data estimates were 86 deer, 16 elk, and 11 cow days use/acre (212 ddu/ha, 40 edu/ha, and 27 cdu/ha). During both readings, a few deer pellet groups appeared to be from spring, but most were from winter use. Elk pellets were from winter. There were also some signs of cattle grazing; all cattle pats sampled appeared to be from the previous summer.

The soils are fairly deep but variable. The average effective rooting depth is estimated at nearly 14 inches with deep soil measurements of nearly 20 inches occurring near shrubs. Soil depths within the shrub interspaces is only 6 to 7 inches. Some areas also contain a calcium carbonate hardpan. The soil texture is a sandy loam with a neutral soil reaction (pH of 7.2). Phosphorus was measured at 5.9 ppm and values less than 6 ppm may limit normal plant growth and development in wildland soils (Tiedemann and Lopez 2004). There is little rock on the surface or within the profile, but there are some exposed boulders near the beginning and end of the baseline. There is some erosion, notably on the steeper slopes near the beginning and end of the baseline. There is evidence of past erosion in the form of soil pedestaling and gully formation. However, there appears to be sufficient protective ground cover to prevent serious erosion. On nearby steeper slopes, erosion is more serious and widespread than on the study site. The erosion index measurement in 2005 rated the soil erosion as moderate, mainly because of small but frequent pedestaling of shrubs and perennial grasses, small gullies covering between 10% and 50% of the site, some minor soil movement, moderate litter movement, many small rills, and minor flow patterns between perennial species.

The key browse species is mountain big sagebrush which provided 11% cover in 1995, 7% in 2000, and 8% in 2005. There are also a variety of other browse species present which include: serviceberry, true mountain mahogany, mountain low rabbitbrush, and bitterbrush. Density for mountain big sagebrush was estimated at 1,866 plants/acre in 1982, 2,199 plants/acre in 1988, 3,000 plants/acre in 1995, 2,980 plants/acre in 2000, and 2,420 plants/acre in 2005. Before 1995, use was light to moderate, but has been moderate to heavy from 1995 to 2005. The percentage of the decadent individuals in the population has been relatively high. It was estimated at 21% in 1982, 70% in 1988, 39% in 1995, 45% in 2000, and 51% in 2005. Tthe percentage of dying individuals in the population is on the decline. In 1995, 21% of the population was dying, 12% in 2000, and 9% in 2005. The young individuals were only 16% of the population in 1995, 5% in 2000, and 4% in 2005. This percentage of young individuals has been around one-half that of the individuals classified as dying, therefore there has been a continual decrease in population. Other preferred browse, serviceberry and true mountain mahogany, occur in small numbers but provide additional forage. Serviceberry shows mostly light to moderate hedging, but some mature individuals have displayed heavy use. Mahogany has shown mostly moderate use, but showed heavy utilization in 2000 and 2005.

Grasses and forbs combined provided 21% cover in 1995, 25% in 2000, and 23% in 2005. Perennial grasses are diverse and thickspike wheatgrass, needle-and-thread, bluebunch wheatgrass, Indian ricegrass, Sandberg's bluegrass, and mutton bluegrass being are the most abundant. Forbs are abundant, but few useful species are present. Timber poisonvetch, king birdbeak, and Hood's phlox provided 8% cover in 1995 and 9% in 2005. In 2000, pussytoes, timber poisonvetch, and Hood's phlox provided 9% cover.

1982 APPARENT TREND ASSESSMENT

Soil trend appears to be stable to declining. Soil movement, while not rapid, appears to be a long-term problem. Vegetation trend also appears to be in a state of decline, which could be reversed in a relatively short time. The most obvious problems involve browse composition and age structure and vigor of the key species. Prior to 1981, the area had been grazed by livestock during the summer and fall. A spring grazing program designed to enhance the browse component might prove beneficial if the increaser shrubs currently present can be held in check or even reduced.

1988 TREND ASSESSMENT

There was an increase in percent bare ground from 39% to 46%. Litter cover also declined but basal vegetation cover increased slightly and frequency of herbaceous vegetation increased. There is continued gully erosion evident on the site, but other soil trend indicators appear stable. Trend for soil is considered stable but in poor condition. A variety of browse species are available, but mountain big sagebrush is the key and the most abundant species. Density of sagebrush has increased slightly but so have the less desirable rabbitbrush species. For the sagebrush, the most important change is in the age class composition. The mostly mature sagebrush population found in 1982 is now 70% decadent, not unusual for 1988. There are few young plants. The sagebrush is lightly to moderately hedged. Sagebrush cover averages 12%. The more palatable, but less common, shrubs such as true mountain mahogany, serviceberry and bitterbrush are also only lightly to moderately hedged. Although poorly sampled due to low numbers, more individuals of these species were counted in 1988 and all are vigorous. Young shrubs are common. Trend for browse is slightly down. In the understory, frequency of grasses and forbs has increased. Trend for grasses and forbs is slightly up.

TREND ASSESSMENT
soil - stable (0)
browse - slightly down (-1)
herbaceous understory - slightly up (+1)

1995 TREND ASSESSMENT

The soil trend is slightly up. The amount of exposed bare soil is down from 46% to 34%. Litter cover continued to decline slightly, but cover of cryptogamic crusts increased to over 5%. There are currently no active gullies on the site, but signs of past soil movement such as pedestaling are evident. Trend for browse is mixed for the key species, mountain big sagebrush. The number of mature plants is similar to that found in 1982 (1,400 to 1,340 plants/acre) and the number of decadent plants declined from 70% to 39%. On the negative side, heavy use increased. No heavy use was reported on sagebrush in 1982 or 1988. During the 1995 reading, 56% of the mature and decadent shrubs displayed heavy hedging. Those plants classified with poor vigor equaled 21%. In addition, 54% of the decadent plants (640 plants/acre) were classified as dying. Dead plants numbered 920 plants/acre, indicating a die off in the past few years. Few seedlings were found, yet young plants are moderately abundant. It appears that the population may decline in the future, but the resulting population will be younger and show better health as long as use is not too extreme. Trend for browse is considered stable at this time. Trend for the herbaceous understory is slightly up with an increase in the sum of nested frequency of perennial grasses and forbs. Nested frequency of thickspike wheatgrass increased significantly while frequency of Indian ricegrass declined significantly. Overall, nested frequency of perennial grasses increased by 18%. Nested frequency for perennial forbs increased by 11%. The Desirable Components Index rated this site as fair with a score of 61 due to moderate browse cover, high decadency, and good perennial grass and forb cover.

TREND ASSESSMENT
soil - slightly up (+1)
browse - stable (0)
herbaceous understory - slightly up (+1)
winter range condition (DC Index) - fair (61) Moderate Potential scale

2000 TREND ASSESSMENT

Trend for soil is stable. Relative percent cover of bare ground and litter are unchanged, while vegetation cover has increased and cryptogamic cover has declined. Overall, the ratio of protective ground cover (vegetation, litter and cryptogams) to bare ground has remained fairly stable since 1995. Trend for the key browse species, mountain big sagebrush, is stable at this time. Use is similar to 1995 levels. Percent decadence is still relatively high at 45%, but a smaller proportion were classified as dying (54% in 1995 and 27% in 2000). Reproduction is marginal with few seedlings encountered and young plants providing for only 5% of the population. If recruitment does not improve, the population will likely decline. A return to normal precipitation patterns will do much to improve sagebrush health and reproduction. Trend for the herbaceous understory is slightly down. Sum of nested frequency of perennial grasses and forbs have declined by 10% and 14%, respectively. Nested frequency of thickspike wheatgrass declined significantly while only about one-third of the grasses remained fairly stable. Nested frequency of perennial forbs declined slightly while nested frequency of annual forbs declined dramatically due to the dry conditions of 2000 (287 to 11). The Desirable Components Index rated this site as good to fair with a score of 67 due to moderate browse cover, high decadency, and excellent perennial grass and forb cover.

TREND ASSESSMENT
soil - stable (0)
browse - stable (0)
herbaceous understory - slightly down (-1)
winter range condition (DC Index) - good to fair (67) Moderate Potential scale

2005 TREND ASSESSMENT

The soil trend is stable. The ratio of protective ground cover (vegetation, litter and cryptogams) to bare ground changed little from 2000 to 2005. The relative cover of bare ground increased slightly and relative cover of litter decreased slightly, but not enough to change the trend. The browse trend is slightly down. The population of the key browse species, mountain big sagebrush, decreased 19% from 2000 to 2005. The majority of the loss was in the mature age class. This general population decrease was coupled with an increase in decadence from 45% of the population in 2000 to 51% in 2005. Despite a decrease in the percentage of dying individuals, the percentage of individuals with poor vigor increased from 14% in 2000 to 17% in 2005. The percentage of young individuals in the population also decreased slightly and produced less than half the number of individuals dying. True mountain mahogany and Utah serviceberry populations are small. The trend for herbaceous understory is slightly up. The nested frequency of perennial grasses increased by 21% and perennial forbs changed little from 2000 to 2005. The cover of both perennial grasses and perennial forbs decreased some. Cheatgrass increased some in both nested frequency and quadrat frequency. The Desirable Components Index rated this site as fair to poor with a score of 52 due to moderate browse cover, high decadency, and good perennial grass and forb cover.

TREND ASSESSMENT
soil - stable (0)
browse - slightly down (-1)
herbaceous understory - slightly up (+1)
winter range condition (DC Index) - fair to poor (52) Moderate Potential scale

HERBACEOUS TRENDS --
Management unit 17 , Study no: 52

Type	Species	Nested Frequency				Average Cover %		
		'88	'95	'00	'05	'95	'00	'05
G	Agropyron dasystachyum	b181	c203	b163	a85	2.23	2.68	2.03
G	Agropyron spicatum	a-	b32	b46	c148	1.14	1.20	1.75
G	Bromus tectorum (a)	-	3	3	11	.00	.00	.19
G	Carex sp.	a3	b46	b44	b34	.27	.29	.13
G	Elymus salina	a39	b67	a21	a12	.99	.82	.07
G	Oryzopsis hymenoides	b145	a79	a67	a50	1.20	1.80	1.12
G	Poa fendleriana	c148	c118	a8	b66	1.35	.21	1.34
G	Poa secunda	a-	a7	c199	b171	.01	6.15	2.21
G	Sitanion hystrix	-	1	-	-	.00	-	-
G	Stipa comata	a-	c74	b14	d111	2.25	.42	2.20
Total for Annual Grasses		0	3	3	11	0.00	0.00	0.19
Total for Perennial Grasses		516	627	562	677	9.48	13.59	10.89
Total for Grasses		516	630	565	688	9.48	13.60	11.08
F	Agoseris glauca	a-	a3	a-	b8	.01	-	.02
F	Allium sp.	a-	c104	a-	b61	.45	-	.24
F	Antennaria rosea	b68	b48	b60	a12	.52	2.10	.33
F	Androsace septentrionalis (a)	-	b35	a-	a-	.14	-	-
F	Arabis sp.	a6	a5	a9	b24	.02	.22	.10
F	Artemisia dracunculus	-	-	2	-	-	.00	-
F	Astragalus convallarius	a83	b139	b122	b131	3.79	3.19	2.83
F	Astragalus sp.	4	3	8	2	.62	.44	.01
F	Castilleja chromosa	a4	a4	b23	a3	.07	.27	.00
F	Calochortus nuttallii	a-	ab3	ab2	b8	.01	.00	.02
F	Chaenactis douglasii	b25	ab9	ab7	a1	.02	.02	.00
F	Chenopodium fremontii (a)	-	6	-	-	.01	-	-
F	Chenopodium leptophyllum(a)	-	b11	a-	ab6	.03	-	.01
F	Cirsium sp.	2	-	2	-	-	.00	-
F	Cordylanthus kingii (a)	-	b81	a3	c119	2.25	.00	2.91
F	Collinsia parviflora (a)	-	b62	a-	c99	.22	-	.57
F	Crepis acuminata	-	9	2	-	.19	.00	-

Type	Species	Nested Frequency				Average Cover %		
		'88	'95	'00	'05	'95	'00	'05
F	Cryptantha sp.	3	-	-	-	-	-	.00
F	Cymopterus sp.	$_{a}$-	$_{b}$24	$_{a}$4	$_{b}$14	.07	.00	.05
F	Delphinium nuttallianum	-	-	-	1	-	-	.00
F	Descurainia pinnata (a)	-	$_{a}$10	$_{a}$-	$_{b}$25	.07	-	.09
F	Eriogonum cernuum (a)	-	3	-	1	.01	-	.00
F	Erigeron eatonii	$_{a}$-	$_{a}$-	$_{a}$-	$_{b}$15	-	-	.42
F	Erigeron pumilus	$_{ab}$36	$_{a}$27	$_{c}$85	$_{bc}$56	.07	.51	.51
F	Gayophytum ramosissimum(a)	-	7	-	11	.06	-	.02
F	Hedysarum boreale	$_{a}$-	$_{b}$30	$_{a}$4	$_{a}$-	.61	.01	-
F	Lappula occidentalis (a)	-	$_{b}$19	$_{a}$-	$_{b}$24	.05	-	.06
F	Lithospermum ruderale	1	3	2	2	.03	.03	.06
F	Machaeranthera canescens	$_{b}$151	$_{a}$19	$_{a}$12	$_{a}$15	.08	.08	.20
F	Penstemon sp.	-	2	1	-	.00	.01	-
F	Phlox hoodii	$_{b}$142	$_{a}$108	$_{ab}$131	$_{a}$108	1.58	3.62	2.79
F	Phlox longifolia	$_{a}$-	$_{b}$30	$_{b}$15	$_{b}$29	.12	.03	.21
F	Polygonum douglasii (a)	-	$_{b}$53	$_{a}$8	$_{b}$61	.13	.04	.14
F	Ranunculus testiculatus (a)	-	-	-	4	-	-	.01
F	Schoencrambe linifolia	-	5	3	1	.01	.00	.03
F	Senecio multilobatus	-	-	6	5	-	.03	.03
F	Sphaeralcea coccinea	$_{b}$55	$_{ab}$31	$_{ab}$32	$_{a}$31	.45	.23	.15
F	Trifolium gymnocarpon	$_{a}$5	$_{c}$50	$_{ab}$29	$_{b}$30	.24	.13	.22
Total for Annual Forbs		0	287	11	350	3.00	0.04	3.84
Total for Perennial Forbs		585	656	561	557	9.00	10.99	8.29
Total for Forbs		585	943	572	907	12.00	11.04	12.13

Values with different subscript letters are significantly different at alpha = 0.10

BROWSE TRENDS --
Management unit 17 , Study no: 52

Type	Species	Strip Frequency			Average Cover %		
		'95	'00	'05	'95	'00	'05
B	Amelanchier utahensis	16	19	20	.82	2.40	.91
B	Artemisia tridentata vaseyana	78	70	69	10.52	7.12	7.80
B	Ceratoides lanata	0	4	3	-	-	-
B	Cercocarpus montanus	7	8	8	.56	.68	.72
B	Chrysothamnus depressus	28	29	32	1.13	.61	1.75
B	Chrysothamnus viscidiflorus lanceolatus	37	31	35	.31	.78	.87
B	Eriogonum corymbosum	18	18	17	.30	.27	.45
B	Juniperus osteosperma	0	0	1	-	-	-
B	Opuntia fragilis	15	8	15	.14	.19	.09
B	Pediocactus simpsonii	0	5	8	-	-	.03
B	Tetradymia canescens	6	4	4	.33	.76	.30
Total for Browse		205	196	212	14.14	12.83	12.95

CANOPY COVER, LINE INTERCEPT --
Management unit 17 , Study no: 52

Species	Percent Cover '05
Amelanchier utahensis	3.34
Artemisia tridentata vaseyana	11.25
Ceratoides lanata	.03
Cercocarpus montanus	1.91
Chrysothamnus depressus	1.81
Chrysothamnus viscidiflorus lanceolatus	3.28
Eriogonum corymbosum	.86
Opuntia fragilis	.11
Pediocactus simpsonii	.06
Tetradymia canescens	.11

KEY BROWSE ANNUAL LEADER GROWTH --
Management unit 17 , Study no: 52

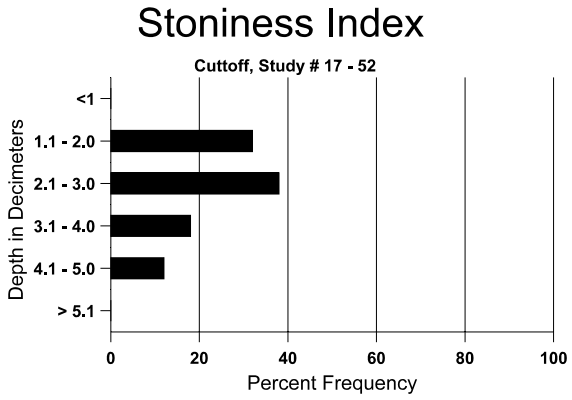
Species	Average leader growth (in) '05
Amelanchier utahensis	3.2
Artemisia tridentata vaseyana	1.4
Cercocarpus montanus	3.8

BASIC COVER --
Management unit 17 , Study no: 52

Cover Type	Average Cover %				
	'82	'88	'95	'00	'05
Vegetation	11.50	13.00	32.34	37.61	37.54
Rock	.75	1.25	.20	.89	.53
Pavement	.75	.25	.26	.62	1.40
Litter	45.00	38.50	35.52	40.88	30.97
Cryptogams	2.75	1.00	5.24	1.69	1.84
Bare Ground	39.25	46.00	34.07	38.95	41.66

SOIL ANALYSIS DATA --
Herd Unit 17, Study # 52, Study Name: Cutoff

Effective rooting depth (in)	Temp °F (depth)	pH	%sand	%silt	%clay	%0M	ppm P	ppm K	dS/m
13.8	61.6 (14.6)	7.2	61.4	19.0	19.6	1.8	5.9	131.2	0.7



PELLET GROUP DATA --
Management unit 17 , Study no: 52

Type	Quadrat Frequency		
	'95	'00	'05
Rabbit	25	38	75
Elk	3	14	14
Deer	44	33	50
Cattle	-	-	3

Days use per acre (ha)	
'00	'05
-	-
8 (20)	16 (40)
96 (236)	86 (212)
3 (7)	11 (27)

BROWSE CHARACTERISTICS --
Management unit 17 , Study no: 52

		Age class distribution (plants per acre)					Utilization					
Year	Plants per Acre (excluding seedlings)	Seedling	Young	Mature	Decadent	Dead	% moderate	% heavy	% decadent	% dying	% poor vigor	Average Height Crown (in)
Amelanchier utahensis												
82	**133**	-	-	133	-	-	100	0	0	-	0	16/22
88	**200**	400	200	-	-	-	0	0	0	-	0	-/-
95	**320**	-	60	260	-	-	38	0	0	-	0	22/26
00	**520**	140	280	220	20	-	4	15	4	4	4	28/31
05	**540**	-	320	160	60	80	44	15	11	-	0	33/38
Artemisia tridentata vaseyana												
82	**1866**	-	66	1400	400	-	46	0	21	-	0	18/26
88	**2199**	-	133	533	1533	-	39	0	70	7	24	18/23
95	**3000**	20	480	1340	1180	920	28	47	39	21	21	20/34
00	**2980**	20	160	1480	1340	620	28	53	45	12	14	20/33
05	**2420**	820	100	1080	1240	1000	21	55	51	9	17	22/35
Ceratoides lanata												
82	**66**	-	-	66	-	-	0	0	0	-	0	14/9
88	**0**	-	-	-	-	-	0	0	0	-	0	-/-
95	**0**	-	-	-	-	-	0	0	0	-	0	6/8
00	**120**	-	-	100	20	-	83	0	17	17	17	7/6
05	**80**	-	-	80	-	-	75	25	0	-	0	13/12
Cercocarpus montanus												
82	**200**	-	-	200	-	-	100	0	0	-	0	20/19
88	**400**	66	400	-	-	-	100	0	0	-	0	-/-
95	**260**	-	20	240	-	-	38	0	0	-	0	22/31
00	**260**	-	20	220	20	-	23	77	8	8	8	32/32
05	**240**	-	-	220	20	-	0	100	8	8	8	41/45

		Age class distribution (plants per acre)					Utilization					
Year	Plants per Acre (excluding seedlings)	Seedling	Young	Mature	Decadent	Dead	% moderate	% heavy	% decadent	% dying	% poor vigor	Average Height Crown (in)
Chrysothamnus depressus												
82	**0**	-	-	-	-	-	0	0	0	-	0	-/-
88	**666**	-	66	600	-	-	0	0	0	-	0	3/6
95	**2520**	-	60	2460	-	-	0	0	0	-	0	6/11
00	**2480**	-	-	2460	20	40	32	19	1	.80	.80	5/10
05	**1700**	20	-	1560	140	60	24	67	8	6	9	7/14
Chrysothamnus nauseosus												
82	**0**	-	-	-	-	-	0	0	-	-	0	-/-
88	**0**	-	-	-	-	-	0	0	-	-	0	-/-
95	**0**	-	-	-	-	-	0	0	-	-	0	-/-
00	**0**	-	-	-	-	-	0	0	-	-	0	7/15
05	**0**	-	-	-	-	-	0	0	-	-	0	-/-
Chrysothamnus viscidiflorus lanceolatus												
82	**1533**	-	-	1533	-	-	0	0	0	-	0	12/15
88	**3132**	-	333	2466	333	-	0	0	11	1	4	8/8
95	**1480**	-	120	1360	-	-	0	0	0	-	0	11/14
00	**1640**	-	20	1620	-	60	5	0	0	-	1	9/13
05	**1480**	-	-	1420	60	20	18	5	4	-	1	11/18
Eriogonum corymbosum												
82	**733**	-	-	733	-	-	0	0	0	-	0	17/15
88	**732**	-	333	133	266	-	0	0	36	-	0	13/11
95	**800**	-	160	640	-	-	0	0	0	-	0	13/18
00	**720**	40	100	380	240	-	11	0	33	3	3	11/15
05	**820**	100	140	640	40	-	20	29	5	-	0	16/21
Juniperus osteosperma												
82	**0**	-	-	-	-	-	0	0	-	-	0	-/-
88	**0**	-	-	-	-	-	0	0	-	-	0	-/-
95	**0**	-	-	-	-	-	0	0	-	-	0	-/-
00	**0**	-	-	-	-	-	0	0	-	-	0	-/-
05	**20**	-	20	-	-	-	0	0	-	-	0	-/-
Opuntia fragilis												
82	**200**	-	-	200	-	-	0	0	0	-	0	3/5
88	**999**	533	333	466	200	-	0	0	20	-	0	1/2
95	**340**	-	60	260	20	-	0	0	6	6	6	4/11
00	**420**	-	-	400	20	60	5	0	5	5	5	2/6
05	**440**	-	20	360	60	-	0	0	14	5	5	3/8

		Age class distribution (plants per acre)					Utilization					
Year	Plants per Acre (excluding seedlings)	Seedling	Young	Mature	Decadent	Dead	% moderate	% heavy	% decadent	% dying	% poor vigor	Average Height Crown (in)
Pediocactus simpsonii												
82	**0**	-	-	-	-	-	0	0	-	-	0	-/-
88	**0**	-	-	-	-	-	0	0	-	-	0	-/-
95	**0**	-	-	-	-	-	0	0	-	-	0	-/-
00	**140**	-	-	140	-	-	0	0	-	-	0	1/2
05	**240**	-	-	240	-	-	0	0	-	-	0	2/3
Purshia tridentata												
82	**66**	-	-	66	-	-	100	0	-	-	0	14/30
88	**133**	-	-	133	-	-	50	0	-	-	0	19/39
95	**0**	-	-	-	-	-	0	0	-	-	0	-/-
00	**0**	-	-	-	-	-	0	0	-	-	0	-/-
05	**0**	-	-	-	-	-	0	0	-	-	0	-/-
Quercus gambelii												
82	**0**	-	-	-	-	-	0	0	-	-	0	-/-
88	**0**	-	-	-	-	-	0	0	-	-	0	-/-
95	**0**	-	-	-	-	-	0	0	-	-	0	-/-
00	**0**	-	-	-	-	-	0	0	-	-	0	-/-
05	**0**	-	-	-	-	-	0	0	-	-	0	51/16
Symphoricarpos oreophilus												
82	**0**	-	-	-	-	-	0	0	-	-	0	-/-
88	**0**	-	-	-	-	-	0	0	-	-	0	-/-
95	**0**	-	-	-	-	-	0	0	-	-	0	-/-
00	**0**	-	-	-	-	-	0	0	-	-	0	10/32
05	**0**	-	-	-	-	-	0	0	-	-	0	13/30
Tetradymia canescens												
82	**200**	-	-	200	-	-	0	0	0	-	0	8/15
88	**66**	-	-	66	-	-	0	0	0	-	0	6/6
95	**140**	-	-	140	-	-	14	0	0	-	0	11/17
00	**80**	-	-	80	-	-	25	0	0	-	0	11/17
05	**80**	-	-	60	20	-	75	0	25	-	0	11/20